

Exhibit 14.15

United States' Motion to Enter Consent Decree,
United States v. Alden Leeds, Inc. et al., Civil Action No. 22-7326 (D.N.J.)

EXHIBIT A-44

Appendix A to OxyChem's Comments in Opposition to Proposed Consent Decree,
United States v. Alden Leeds, Inc., et al., Civil Action No. 2:22-cv-07326 (D.N.J.)

PRODUCT (FROM 2,4,5-TRICHLOROPHENOL PURE
USING TOLUENE AS SOLVENT)

OPERATION Reaction

Bldg. No.	Unit No.	Type of Unit	PART I
58	TZ-170	Glass Lined Reactor, 750-Gallon	
82	TZ-114	Glass Lined Reactor, 300-Gallon	
82	TU-147	Glass Lined Feed Tank, 150-Gallon	

2) P. Doucette
3) R. Genet
4) A. Gessner
5) S. Gold
6) P. Gross
7) N. Panagiotakis
8) C. Snyder
9) V. Weglowski
10) Production Directors
11) Geneva (2)
H. Kuhnau 2-20-81
V. Lippold 11-5-81
J. Rankin 12/17/82

Wt. Lbs.	Material	Analysis
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600	Trichlorophenol Pure	Specific Gravity: 1.30
1,650	Sulfuric Acid 93%	Specific Gravity: 1.83
198	Methyl Alcohol	Specific Gravity: 0.792
132	Aqueous Formaldehyde, 37%	
600	Water	

TRICHLOROPHENOL: WARNING! Dust and fumes irritating to eyes, nose and throat. Do not breathe dusts or fumes. Avoid contact with skin. Wear chemical goggles or face shield, apron, rubber gloves and OV respirator with dust filter when handling.

SULFURIC ACID 93%: DANGER! Causes severe burns. Avoid all contact. Wear chemical goggles and/or face shield, apron and rubber gloves. Avoid breathing mist, wear acid gas respirator if irritating to respiratory system.

METHYL ALCOHOL: DANGER! Flammable. Prolonged or repeated breathing of vapor harmful. Ground all equipment and containers. Wear gloves, full goggles and/or face shield when handling.

FORMALDEHYDE 37%: DANGER! Vapor or liquid causes skin, eye, nose and throat irritation. Wear OV respirator, rubber gloves and full goggles and/or face shield when handling. Avoid all contact with skin.

Step No.	Procedure	[With Brief Special Remarks]
1.	Check that reactor TZ-114 in Building 82 is clean.	
2.	Charge by vacuum 1,650 lbs. Sulfuric Acid 93% to TZ-114.	
3.	Charge by vacuum 198 lbs. Methyl Alcohol to feed Tank TU-147.	
4.	Turn on agitation and cool batch in TZ-114 to 20°C with cooling water.	
5.	With cooling water on, slowly feed 198 lbs. Methyl Alcohol over 1/2 hour to Sulfuric Acid. Keep batch temperature below 40°C with cooling water and controlling feed of Methyl Alcohol.	
6.	Drain to polyethylene lined drums at 20-25°C and move to Building 58. <u>Wear full face shield, apron and rubber gloves while draining.</u>	
7.	Check that reactor TZ-170 in Building 58 is clean.	
8.	Charge by vacuum Sulfuric Acid/Methyl Alcohol mixture to reactor TZ-170. Start agitation.	
9.	Heat charge in reactor to 70-75°C.	

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10. Charge by vacuum 600 lbs. (1 drum) TCP Pure from hot box.
11. With reactor at 75°C, slowly, over approximately 30 minutes, add from a suspended drum with scale 132 lbs. Aqueous Formaldehyde. Maintain batch at 75-80°C with cooling water, if necessary.
12. Heat charge in reactor to 80°C and agitate 1 hour.
13. After 1 hour agitation, slowly, over 30 minutes, add 600 lbs. (72-gal.) of water through the meter, maintaining the temperature below 90°C. Agitate 5 minutes.
14. After water is added, take a gallon sample. Sample taken from manhole without agitation. Wear full protective gear, face shield, respirator with OV cartridge, rubber gloves and apron. (See Note 1).

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Wt.	Material	Analysis	Containers, Disposition, etc.
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Note 1: Sample is taken to check consistency of batch. Should be granular. See supervisor before continuing.

	Prepared By	Date	Rev. By Safety Dept.	Date
ORIGINAL	<i>V. Weglowski</i>	<i>5/18/79</i>	<i>P. Donatto</i>	<i>5/31/79</i>
REVISED				

PRODUCT G-11@ N.P. PART II

OPERATION Steaming and Separation

Bldg. No.	Unit No.	Type of Unit	Remarks
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58	TZ-170	Glass Lined Reactor, 750-Gallon	
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59	TY-134	#1 Settler, 1,000-Gallon Steel	
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Wt.	Material	Analysis	Remarks
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1,800 lbs.	Toluene		
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400 lbs.	Toluene for wash		
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TOLUENE: WARNING! Flammable. Breathing vapor may be harmful. Causes eye injury and skin irritation. Ground all containers. Wear gloves and goggles or face shield when handling.

Step No.	Procedure	[With Brief Special Remarks]
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15.	Open drain valves from reactor condenser to run distillate to sewer. Turn on warm water ($\sim 70^\circ$) to condenser (to prevent TCP from congealing). (Note 2).	
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16.	Heat reactor TZ-170 to 100°C .	
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17.	With steam on the reactor jacket, inject live steam through bottom drain. Pot temperature rises rapidly to $125\text{--}130^\circ\text{C}$, then slowly drops to $115\text{--}120^\circ\text{C}$ during steaming.	
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18.	Steam for 2 hours and check distillate with 10% Ferric Chloride Solution (See Note 3). Continue steaming if TCP test positive.	
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19.	When steaming is complete, cool batch to 100°C and take a level reading from 2" nozzle. If reading 50" (450-gal.) or greater proceed. If less than 50", stop agitator and allow the batch to settle for 1/2 hour. Then siphon off top water layer to 50" level.	
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20.	Set valves to run distillate from reactor condenser back to reactor. Change condenser water from warm to cold.	
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21. Charge by vacuum 1,800 lbs. Toluene to TZ-170.
22. Heat to reflux (92-95°C). Reflux 1/2 hour, then shut agitation and jacket steam and settle 1 hour. Keep batch temperature at 95°C.
23. Drain bottom acid layer from reactor to polyethylene lined drums. Wear full protective gear, face shield, rubber gloves and apron. Take 1 gallon sample. Have 8-10 polyethylene lined drums on hand per batch.
24. Preheat settler TY-134 in Building 59. Transfer batch charge from reactor to settler TY-134, then immediately transfer to treatment tank TZ-168 in Building 59.
25. Charge by vacuum 400 lbs. Toluene to reactor TZ-170, pump to settler TZ-134, then to treatment tank TZ-168 to clean reactor, settler, and transfer lines.

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Wt.	Material	Analysis	Containers, Disposition, etc.
3,700-4,000 lbs.	Spent Sulfuric Acid		55-gal. polyethylene lined drums. If material balance of batch OK, drain to sewer.

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- Note 2: Discharge connection pipe from condenser during steaming should be extended to lead directly to sewer.
- Note 3: For TCP test - 25 mls. distillate at 25°C, add 5 drops 10% FeCl₃ solution. If purple, continue steaming. If yellow or yellowish orange, steaming complete.

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	Prepared By	Date	Rev. By Safety Dept.	Date
ORIGINAL	<i>J. Wybowicki</i>	<i>5/18/79</i>	<i>P. Drucetto</i>	<i>5/31/79</i>
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PRODUCT G-11® N.P. PART III

OPERATION Decolorization and Filtration

Bldg. No.	Unit No.	Type of Unit	Remarks
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59	TZ-168	Treatment Tank, 1,000-Gallon Steel	
59	FL-9633	Sparkler Filter	
59	TZ-31	Storage Tank, 1,000-Gallon Glass-Lined	

Wt.	Material	Analysis	Remarks
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70 lbs.	Filtrol Grade #4		
3 lbs.	Hyflo Super-Cel		
100 gals.	Toluene		

FILTROL: CAUTION! Not known to be hazardous. Wear dust mask if heavy dusting occurs while handling.

SUPER-CEL: WARNING! Diatomaceous Silica. Inhaling dust harmful. Dust mask or cartridge respirator with dust filter MUST be worn when handling.

TOLUENE: WARNING! Flammable. Breathing vapor may be harmful. Causes eye injury and skin irritation. Ground all containers. Wear gloves and goggles or face shield when handling.

STIK TIGHT ROUGH CEMENT: CAUTION! May be irritating. Wear dust mask if heavy dusting occurs while handling. Material is asbestos free.

Step No.	Procedure	[With Brief Special Remarks]
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- To G-11/Toluene solution in treatment tank TZ-168, charge 70 lbs. Filtrol #4 and 3 lbs. Hyflo Super-Cel. Wear OV respirator with dust filter when charging.
- Reflux with agitation for 1-1/2 hours with temperature at 110-113°C. A small amount of water will be azeotropically distilled to the separator (10 lbs.).
- Heat jacket of sparkler filter FL-9633 for 15 minutes with full steam.
- Cool batch in treatment tank TZ-168 to 100°C.
- Partially open vent on top of sparkler, close sparkler drain valve and pump batch from treatment tank to sparkler expelling air through the vent valve.
- As soon as sparkler is full, shut vent valve and open sparkler discharge valve sending the filtrate back to the treatment tank on recycle. Keep sight glass full at all times by proper valve adjustment.

OPERATING
PROCEDURE
CONTINUED

7. Recycle at 95-100°C for at least 15 minutes. When batch is sparkling clear, take 1-gallon sample and label with time, date, batch and operator. Check with supervisor before proceeding.
8. If batch is not sparkling clear, add 4 lbs. of Super-Cel and 4 lbs. Stik Tight Rough Cement to the pump filter basket and recycle until batch is clear. If batch does not become sparkling clear, check with supervisor.
9. When batch is sparkling clear, switch from recycle and filter batch into storage tank TZ-31, adjusting valves as required to keep sight glass full, sparkling clear and free of air bubbles. At this point, do not leave filtration unattended. Go back to recycle tank TZ-168 if filtrate not sparkling clear. Do not pump filtrate which is not clear into storage tank TZ-31.
10. Stop agitation in treatment tank TZ-168 when level is low. When treatment tank is empty, stop pump and reset valves for recycle of filtrate to treatment tank for the next batch.
11. Charge 100 gallons Toluene to treatment tank TZ-168 and heat to reflux. At this point, open vent valve on sparkler and close sparkler discharge valve. Pump agitated wash to sparkler, expelling air from sparkler vent valve. When sparkler is full, shut vent valve, open discharge valve to treatment tank and recycle wash back to treatment tank TZ-168 until sparkling clear. When sparkling clear, pump wash into storage tank TZ-31. If wash not clear, check with supervisor.
12. When treatment tank is empty, repeat Step #11 but return this wash to treatment tank and allow sparkler to drain to treatment tank.
13. Filtrate which is not sparkling clear must never be pumped to storage tank TZ-31. Take a gallon sample from TZ-31 after filtration. Also take a 5-lb. sample of the filter cake from sparkler FL-9633. Wear OV cartridge respirator with dust mask, rubber gloves and apron when handling samples.

Wt.	Material	Analysis	Containers, Disposition, etc.
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PRODUCTS

MISC.
NOTES

	Prepared By	Date	Rev. By Safety Dept.	Date
ORIGINAL	<i>J. Weglowski</i>	<i>5/18/79</i>	<i>P. Druetto</i>	<i>5/31/79</i>
REVISED				

PRODUCT G-11@ N.P.

PART IV

OPERATION Steam Distillation (Solvent Stripping)

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Bldg. No.	Unit No.	Type of Unit	Remarks
59	TZ-31	Storage Tank, 1,000-Gallon, Glass	
59	TZ-2	Steam Still, 1,000-Gallon, Glass	
59	or TZ-48		

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Wt.	Material	Analysis	Remarks
600 lbs.	G-11	Solution	
2,800-2,900 lbs.	Toluene		
1-2 lbs.	Oxalic Acid		
400 lbs.	Toluene for wash		

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G-11: May be irritating - full goggles and dust mask must be worn when exposed to powder.

TOLUENE: WARNING! Flammable. Breathing vapor may be harmful. Causes eye injury and skin irritation. Ground all containers. Wear gloves and goggles or face shield when handling.

OXALIC ACID: DANGER! POISONOUS - Dust or solution can cause severe burns of the skin, eyes and respiratory tract. Dust mask, full goggles, and rubber gloves must be worn when handling.

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Step No.	Procedure	[With Brief Special Remarks]
1.	Check that the Tiger filters and the GAF polishing filters are properly cleaned, installed, heated and ready for service.	
2.	Check that distillate lines are open to the outside portable tankcar and blocked off to the underground ethylene dichloride storage tank. Portable tankcar will serve as a separator with the bottom aqueous layer to sewer and top Toluene layer to drums.	
3.	Charge steam still TZ-2 or TZ-48 with 250 gallons of water and 1-2 lbs. Oxalic Acid. Start agitator.	
4.	Heat steam still to reflux (98-100°C) with live steam and jacket steam. Set valves so that distillate will pass through liquid cooler and separator.	
5.	Keep G-11/Toluene solution in storage tank TZ-31 at 90°C with steam on jacket.	

6. When steam still temperature reaches 98-100°C, feed G-11/Toluene solution to steam still by way of polishing filters. Start with the following: Live steam - 6 lbs. then increase to 10 lbs.
Roto setting for feed - 2 then increase to 3
Keep jacket steam on during the steam distillation. Steam still should never be run at positive pressure, which would indicate steam pressure is too high, feed rate too high or that the system has a partial plug.
7. Keep batch in steam still at 95-98°C. If batch temperature drops below 95°C, increase jacket steam and slow feed rate. Record steam pressure in jacket and live steam readings, rotameter settings and condenser water pressure. Take 1 gallon sample of water and Toluene distillates.
8. When the holding tank TZ-31 is empty, rinse the lines between holding tank and steam still with 50 gallons of Toluene and feed to steam still.
9. Distill for 1/2 hour after the feeding is completed. Then check distillate for Toluene. When no Toluene is present, check the distillate for TCP with 10% Ferric Chloride.
10. When batch is free of TCP, cool batch to 90°C, then pump batch to cooling tank in Building 60 (TZ-30). Wash out still with water.
11. Batch is then filtered (Building 60), dried (Building 60) and ground (Building 47).

Wt.	Material	Analysis	Containers, Disposition, etc.
550-585 lbs.	G-11 N.P.	Purity: 98% Melting Point: 161-167 Color: White to Beige	Plastic Lined Lever Paks

- 1) TCP Test: Add 5 drops 10% Ferric Chloride to 25 mls. of (1 oz.) distillate. If the color is purple, TCP is present, continue steaming. If the color is yellow or yellowish-orange, steaming is complete.

	Prepared By	Date	Rev. By Safety Dept.	Date
ORIGINAL	<i>Z. Weglowski</i>	<i>5/18/79</i>	<i>P. Mucillo</i>	<i>5/31/79</i>
REVISED				